

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No. 10/660,730
Attorney Docket No. Q77482

REMARKS

General remarks

Claims 188 – 191 are pending in the application. Claims 1 – 187 and 192 – 313 are canceled. Claim 188 is currently amended.

Applicant has carefully studied the outstanding Office Action in the present application. The present response is intended to be fully responsive to all points of rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application are respectfully requested.

Withdrawal of Final Rejection

Withdrawal of the final rejection pursuant to Applicants' arguments submitted on May 15, 2006 is acknowledged with appreciation.

Claims Rejections

Claims 188 – 191 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Jain et al. (US6,515,257) in view of James et al. (US 5,463,200). Claims 190 – 191 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Jain et al. (US 6,515,257) in view of James et al. (US 5,463,200) and JP 406043505A or JP02003051142A.

Applicants respectfully traverse the rejections as applied to the rejected claims.

Jain et al. describes a high speed maskless via generation system employing a high-power laser beam divided into multiple beamlets which are simultaneously directed to different via sites by a spatial light modulator array. James et al. describes a technique for marking a workpiece by light energy in which a plurality of beam are arranged in an array and are each focused by a microlens array independently of the other beamlets. JP 406043505A and JP02003051142A, as noted by the Examiner in the Office Action mailed on February 15, describe well known acousto-optical deflecting elements.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No. 10/660,730
Attorney Docket No. Q77482

Independent claim 188 is currently amended and now requires, in relevant part, “independently focusing ones of said plurality of laser beams to different independently selectable locations, said independently focusing comprising moving at least one optical element associated with a beam to be focused, without f-theta optical elements.” Support for this amendment is found at paragraphs [0119] – [0121] of the published patent application, *inter alia*.

This feature is not found in either of the Jain or James references. With respect to the Jain reference, although the beams may be independently directed to independently selectable locations by tip-tilt micro-mirrors, steering a beam to a different location may change its respective focal length. However, as pointed out in Applicant's response submitted on May 15, 2005, “in Jain, focusing the beams to locations is performed by elements 10, which are not movable”.

The deficiency of the Jain reference, with respect to amended claim 188, is not remedied by the James reference, *inter alia*, because James' plurality of beams are all focused perpendicularly to locations on a surface of a workpiece lying in the same plane, and the array of microlenses is moved as a group (or the workpiece is moved) thus affecting all of the beams together. James fails to show or describe “independently steering said plurality of laser beams” or “independently focusing ones of said plurality of beams to different independently selectable locations”, because the locations of the beams are fixed by the microlens array. Moreover, in James, because the microlens array operates as a unit, changing the focus with respect to one beam would necessarily affect the focus of other beams in the array of beams. Inasmuch as ones of James' beams would be independently steered to independently selectable locations, for example if combinable with Jain, changing the focus distance of James' microlens array to focus one of the beams in the array would cause the defocusing of other beams which are directed to locations having a different focal length.

In summary, the combination of the Jain and James references fails to establish a *prima facie* case of obviousness because these references, alone or in any combination, fail to provide a reasonable expectation of success. Moreover, they fail to show or suggest the claim limitation of

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No. 10/660,730
Attorney Docket No. Q77482

"independently focusing ones of said plurality of laser beams to different independently selectable locations, said focusing comprising moving at least one optical element", *inter alia*.

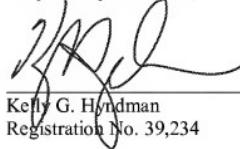
In view of the foregoing the Examiner is respectfully requested to withdraw the rejection of claim 188, and of its dependent claims 189 – 191 which are each patentable at least by virtue of their dependency from claim 188.

Conclusion and request for telephone interview

In view of the foregoing, this application is believed to be in order. Reconsideration and allowance of this application are respectfully solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Kelly G. Hyndman
Registration No. 39,234

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: August 25, 2006